

-continued

100	105	110	
Asp Phe Ala Thr Asn Ile Trp Leu Gln Met Glu Asp Leu Gly Ala Ala			
115	120	125	
Pro Ala Val Gln Pro Xaa Gln Gly Ala Met Pro Thr Phe Thr Ser Ala			
130	135	140	
Phe Gln Arg Arg Ala Gly Gly Val Leu Val Ala Ser Gln Leu His Arg			
145	150	155	160
Phe Leu Glu Leu Ala Tyr Arg Gly Leu Arg Tyr Leu Ala Glu Pro			
165	170	175	

<210> SEQ ID NO 14
<211> LENGTH: 175
<212> TYPE: PRT
<213> ORGANISM: Bos taurus
<220> FEATURE:
<221> NAME/KEY: misc_feature
<222> LOCATION: (137) ..(137)
<223> OTHER INFORMATION: wherein Xaa is para-acetylphenylalanine (pAF) linked to a poly(ethylene glycol) moiety

<400> SEQUENCE: 14

Met Thr Pro Leu Gly Pro Ala Arg Ser Leu Pro Gln Ser Phe Leu Leu			
1	5	10	15
Lys Cys Leu Glu Gln Val Arg Lys Ile Gln Ala Asp Gly Ala Glu Leu			
20	25	30	
Gln Glu Arg Leu Cys Ala Ala His Lys Leu Cys His Pro Glu Glu Leu			
35	40	45	
Met Leu Leu Arg His Ser Leu Gly Ile Pro Gln Ala Pro Leu Ser Ser			
50	55	60	
Cys Ser Ser Gln Ser Leu Gln Leu Thr Ser Cys Leu Asn Gln Leu His			
65	70	75	80
Gly Gly Leu Phe Leu Tyr Gln Gly Leu Leu Gln Ala Leu Ala Gly Ile			
85	90	95	
Ser Pro Glu Leu Ala Pro Thr Leu Asp Thr Leu Gln Leu Asp Val Thr			
100	105	110	
Asp Phe Ala Thr Asn Ile Trp Leu Gln Met Glu Asp Leu Gly Ala Ala			
115	120	125	
Pro Ala Val Gln Pro Thr Gln Gly Xaa Met Pro Thr Phe Thr Ser Ala			
130	135	140	
Phe Gln Arg Arg Ala Gly Gly Val Leu Val Ala Ser Gln Leu His Arg			
145	150	155	160
Phe Leu Glu Leu Ala Tyr Arg Gly Leu Arg Tyr Leu Ala Glu Pro			
165	170	175	

What is claimed is:

1. A stable aqueous formulation comprising
 - (a) a bovine granulocyte colony stimulating factor (bG-CSF) polypeptide of SEQ ID NO: 1 or SEQ ID NO: 2 comprising a non-naturally encoded amino acid substituted at position 133 of SEQ ID NO: 1 or the corresponding amino acid in SEQ ID NO: 2; 55
 - wherein the non-naturally encoded amino acid is para-acetylphenylalanine;
 - wherein said para-acetylphenylalanine is bonded to a water soluble polymer being a poly(ethylene) glycol moiety having a molecular weight of about 20 kDa;
 - (b) a citrate buffer;
 - (c) arginine, and optionally a counter ion for arginine;

- (d) wherein said formulation contains less than 0.0033% of a surfactant; and
- (e) wherein pH of the formulation ranges from 5.7 to 6.6.
2. The formulation of claim 1 wherein said surfactant is a polyoxyethylene derivative of sorbitan monolaurate.
3. The formulation of claim 2 wherein said surfactant is a polyoxyethylene (20) sorbitan monolaurate.
4. The formulation of claim 1 wherein the counter ion for arginine is chloride or sulfate.
5. The formulation of claim 1 optionally including one or more other therapeutic ingredients.
6. A lyophilisate or powder of the formulation of claim 1.
7. A process for preparing the formulation of claim 1 comprising forming a stable aqueous solution comprising said bG-CSF polypeptide, a citrate buffer, arginine, and optionally a counter ion for arginine.